



UNITED STATES PATENT AND TRADEMARK OFFICE

CH
UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/688,246	10/16/2003	Chenera Balan	A-825	2469
21069	7590	04/06/2007		
AMGEN INC. MAIL STOP 28-2-C ONE AMGEN CENTER DRIVE THOUSAND OAKS, CA 91320-1799			EXAMINER BERNHARDT, EMILY B	
			ART UNIT	PAPER NUMBER
			1624	

SHORTENED STATUTORY PERIOD OF RESPONSE	MAIL DATE	DELIVERY MODE
31 DAYS	04/06/2007	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

Office Action Summary

Application No.

10/688,246

Applicant(s)

BALAN ET AL.

Examiner

Emily Bernhardt

Art Unit

1624

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 1 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 11 January 2007.
- 2a) ☐ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 41-65 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☐ Claim(s) _____ is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☒ Claim(s) 41-65 are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 1/11/07 has been entered. Applicants have cancelled all previous claims and presented new claims 41-65 for consideration.

Consistent with the statement made in the Restriction mailed 10/24/05, namely, that further restriction may be required at Q3-Q6 and at Rc the following restriction is applied.

Restriction to one of the following inventions is required under 35 U.S.C. 121:

- I. Claims 41-42, 45-54 and 56-65, drawn to compounds where all of Q3-Q6 are C atoms and Rc (as R4) = monocyclic rings, classified in class 544, subclasses various based on the exact nature of said ring as well as additional rings present throughout the formula- notably at R1 and R5. For example, when pyridine is present 544/360 is the field of search. When

additional ring(s) are present such as in eg.268, 544/364 is the field of search. When pyrimidine is present as Rc, 544/295 is the field of search; for pyrazine, 544/357 is the correct classification.

- II. Claims 41,42,45-52 and 55-65., drawn to compounds where all of Q3-Q6 are C atoms and Rc = bicyclic rings, classified in class 544, subclass 363 for quinolines/isoquinolines; many other classes and/or subclasses for fused –phenyl, fused-pyrido, fused-pyrimido ring systems of the scope presented in the specification on p.16-17.
- III. Claims 41,43,45-54 and 56-64, drawn to compounds where one of Q3-Q6 is N and the remainder are C atoms and Rc= monocyclic rings, classified in class 544, subclass 362 and many other classes and/or subclasses based on the nature of Rc,R1 and R5.
- IV. Claims 41,43,45-52 and 55-64, drawn to compounds where one of Q3-Q6 is N and the remainder are C atoms and Rc= bicyclic

rings except for benzimidazole already provided for by II when $m=0$, classified in class 544,540, subclasses various as determined by R_c, R_1 and R_5 .

- V. Claims 41,44-54 and 56-64, drawn to compounds where two of Q_3-Q_6 are N atoms and the remainder are C atoms and R_c =monocyclic rings, classified in class 544, subclasses such as 236,277,350 and other classes/subclasses based on the nature of R_c, R_1 and R_5 .
- VI. Claims 41,44-52 and 55-64, drawn to compounds where two of Q_3-Q_6 are N atoms and the remainder are C atoms and R_c =bicyclic rings not already provided for by II (benzimidazoles or IV (pyridopyrazoles) when $m=0$, classified in class 544, subclasses such as 236,277, 350 and many others, for example 90, 105 when benzofused oxazines are present.
- VII. Claims 41,45-54 and 56-64, drawn to compounds where three or more of Q_3-Q_6 are N atoms and R_c = monocyclic rings , classified in class 544, subclasses such as 179,184, etc. and class 540 various subclasses when 7-membered rings are present.

VIII. Claims 41,45-52 and 55-64, drawn to compounds where three or more of Q3-Q6 are N atoms and Rc= bicyclic rings not already provided for by II (benzimidazoles) or IV (pyridopyrazoles) or VI (diazinofused pyrazoles) when m=0, classified in class 544, subclasses such as 48 when fused thiazines can be present or subclass 9 when fused thiadiazines are present or subclasses 81,82 when fused oxadiazines can be present and class 540, various subclasses based on the nature of the fused 7- or 8-membered fused ring system.

In addition to an election of one of the above groups applicants must also elect a single species for initial examination of the elected group.

The inventions are distinct, each from the other because of the following reasons: The compounds within claim 41 relate to compounds of considerable structural dissimilarity notwithstanding the presence of the piperazine core which by itself is not solely responsible for activity. Note the many references of record pointed out in the earlier restriction which shows many different types of activity and uses based on the nature of

substituents thereon. Additionally, the search for the various groups is not coextensive but rather differs widely and based on actual species elected will have different field of search. The compounds are not art-recognized equivalents as evident at the very least by Sun applied in a previous action and only applicable to a small part of the subject matter covered within group I. Many electronic searches would be needed for the various Q3-Q6 choices given the multitude of answers expected to be generated for such compounds as piperazine *per se* is old.

Applicant is advised that the reply to this requirement to be complete must include (i) an election of a species or invention to be examined even though the requirement be traversed (37 CFR 1.143) and (ii) identification of the claims encompassing the elected invention.

The election of an invention or species may be made with or without traverse. To reserve a right to petition, the election must be made with traverse. If the reply does not distinctly and specifically point out supposed errors in the restriction requirement, the election shall be treated as an election without traverse.

Should applicant traverse on the ground that the inventions or species are not patentably distinct, applicant should submit evidence or

identify such evidence now of record showing the inventions or species to be obvious variants or clearly admit on the record that this is the case. In either instance, if the examiner finds one of the inventions unpatentable over the prior art, the evidence or admission may be used in a rejection under 35 U.S.C.103(a) of the other invention.

Applicant is reminded that upon the cancellation of claims to a non-elected invention, the inventorship must be amended in compliance with 37 CFR 1.48(b) if one or more of the currently named inventors is no longer an inventor of at least one claim remaining in the application. Any amendment of inventorship must be accompanied by a request under 37 CFR 1.48(b) and by the fee required under 37 CFR 1.17(i).

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Emily Bernhardt whose telephone number is 571-272-0664.

If attempts to reach the examiner by telephone are unsuccessful, the acting supervisor for AU 1624, James O. Wilson can be reached at 571-272-0661. The fax phone number for the organization where this application or proceeding is assigned is (571) 273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.



Emily Bernhardt
Primary Examiner
Art Unit 1624